


Gene construction

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 An abbreviated version of this protocol was published in Science in Jun 2020

A noncompeting pair of human neutralizing antibodies block COVID-19 virus binding to its receptor ACE2

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Detailed protocol

The recombinant protein COVID-19 virus RBD was constructed into two vectors. Residues 331-532 (accession number EPI_ISL_402119) were cloned into pET21a for isolating MAbs as a bait. The coding sequences of COVID-19 RBD (residues 331-532), SARS-CoV RBD (residues 306-527, accession number NC_004718), and hACE2 (residues 19-615, accession number BAJ21180) were used in assays of SPR, BLI and crystal screening were constructed into pFastBac1 plasmid with an N-terminal gp67 signal peptide and a C-terminal six histidine tag. The pEGFP-N1-hACE2 plasmid was constructed by cloning the coding region into pEGFP-N1 vector using restriction enzymes XhoI and SmaI.

How to cite: (Readers should cite both the Bio-protocol preprint and the original research article where this protocol was used)

1. Wu, Y. , Gao, G. F. and Gao, F. (2021). Gene construction. Bio-protocol Preprint. bio-protocol.org/prep881.
2. Wu, Y., Wang, F., Shen, C., Peng, W., Li, D., Zhao, C., Li, Z., Li, S., Bi, Y., Yang, Y., Gong, Y., Xiao, H., Fan, Z., Tan, S., Wu, G., Tan, W., Lu, X., Fan, C., Wang, Q., Liu, Y., Zhang, C., Qi, J., Gao, G. F., Gao, F. and Liu, L.(2020). A noncompeting pair of human neutralizing antibodies block COVID-19 virus binding to its receptor ACE2 . Science 368(6496). DOI: [10.1126/science.abc2241](https://doi.org/10.1126/science.abc2241)

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